

Corporate Presentation

November 2022

Certain statements in this report concerning our future growth prospects are forward looking statements, which involve a number of risks, and uncertainties that could cause actual results to differ materially from those in such forward looking statements. The risk and uncertainties relating to these statements include, but are not limited to risks and uncertainties regarding fluctuations in earnings, our ability to manage growth, intense competition within Steel industry including those factors which may affect our cost advantage, wage increases in India, our ability to attract and retain highly skilled professionals, time and cost overruns on fixed-price, fixed-time frame contracts, our ability to commission mines within contemplated time and costs, our ability to raise the finance within time and cost client concentration, restrictions on immigration, our ability to manage our internal operations, reduced demand for steel, our ability to successfully complete and integrate potential acquisitions, liability for damages on our service contracts, the success of the companies in which the Company has made strategic investments, withdrawal of fiscal/governmental incentives, impact of regulatory measures, political instability, legal restrictions on raising capital or acquiring companies outside India, unauthorized use of our intellectual property and general economic conditions affecting our industry. The company does not undertake to update any forward looking statements that may be made from time to time by or on behalf of the company.

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Sustainability Framework and Priorities

17 Focus Areas



Climate Change:

- Aligned to India's Nationally Determined Contributions for Climate Change as per Paris Accord
- Carbon neutrality at JSW Coated by 2030
- >42% reduction in specific CO₂ emissions by 2030 (vs. base year 2005)



Waste: 100% solid waste utilization



Biodiversity: No Net Loss for Biodiversity



Waste Water: Zero Liquid Discharge



Water Resources: >39% reduction in fresh water consumption by 2030 (vs. base year 2005)



Resources



Sustainable Mining



Social Sustainability



Local Considerations



Indigenous People



Human Rights



Supply Chain Sustainability



Employee Wellbeing



Air Emissions



Business Ethics



Cultural Heritage



Energy

Aligned to
National &
International
Frameworks



[JSW Policies for each Focus Area are available on our website](#)

Governance & Oversight By Board-level Business Responsibility And Sustainability Committee

Independent Directors

Ms. Fiona Paulus (Chair)

Dr. (Mrs.) Punita Kumar Sinha

Mrs. Nirupama Rao

Executive Directors

Mr. Seshagiri Rao M. V. S.

Mr. Jayant Acharya

Integrated Reporting



FY 2019



FY 2020



FY 2021



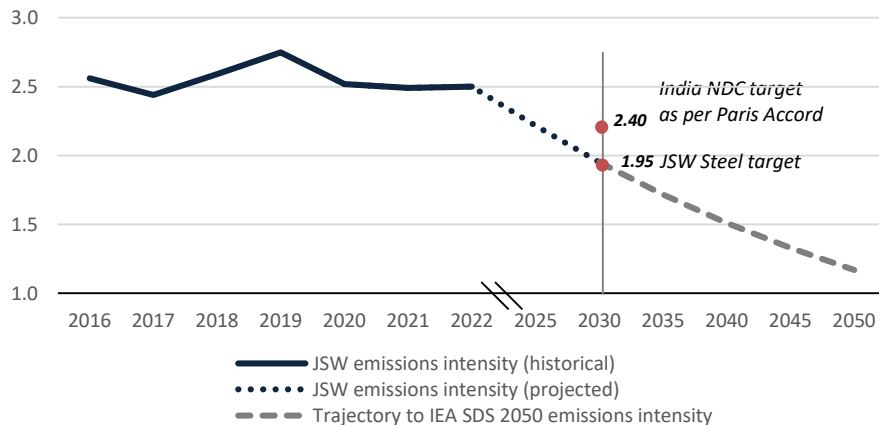
FY 2022

Click on images for reading online.

Climate Change: Emission Target and Initiatives

Derivation of carbon emission target for 2030

- The Sustainable Development Scenario (SDS) ^(a) requires direct emission intensity of crude steel production in India to **fall over 60% by 2050 on the path to net zero in 2070**
- The 2030 target is based on following the trajectory needed to reach a derived **emissions intensity of 1.17 tCO₂/tcs by 2050** ^(b)
- India's Nationally determined contribution (NDC) as per Paris Accord for 2030 is 2.4 tCO₂/tcs



Planned/ Potential initiatives to reduce CO₂ intensity

- ✓ Energy Transition from thermal to Renewable in steel making
- ✓ Reduction of Coke rate through iron ore beneficiation, PCI, use of natural gas in BF and DRI
- ✓ Increased use of scrap in steel making
- ✓ Implementation of Best Available Technologies (BATs)
- ✓ Process Improvements based on the world steel 'step up' global benchmarking process
- ✓ Scaling up Carbon Capture & Use (CCU)



Issued Global Steel Industry's First USD Sustainability-Linked Bond in Sept 2021

Note:

(a) Based on the International Energy Agency's (IEA) Iron and Steel Technology Roadmap, published in 2020

(b) Taking account of both the direct (Scope-1) and indirect energy (Scope-2) emissions

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JSW Group: Key Verticals



- **India's largest steel producer**
- Capacity of 29.2 mtpa, growing to 38.5 mtpa
- Listed on NSE, BSE. Market cap of US\$21bn



- Capacity of 4.8 GW (Hydro, Renewable and Thermal)
- Growing to 20 GW by 2030 with **81% renewable portfolio**
- Listed on NSE, BSE. Market cap of US\$6.7bn



- Capacity of **130,000 ktpa**
- Only fully-automated, water-based plant in India



- Ports capacity of **153 mtpa**
- Operations across East, West & Southern coasts of India



- **Capacity of 17 mtpa, growing to 25 mtpa**
- India's leading green cement company



- Social development arm of the Group, with footprint across 11 states and 15 districts
- **Reaching out to +1 mn individuals** around the operating locations



- Aims at nurturing the sporting dream of India
- Trained **Olympic medal winners**
- Associated with champion teams like Delhi Capitals, Bengaluru FC and Haryana Steelers



- Early stage, tech focused **Venture Capital fund**
- Invests in companies building innovative solutions that leverage India's demographic dividend, consumption drivers and technological advancements



One of the leading steel players in India

- Most geographically diversified steel company in India
- Sustainability and Governance at the core of the enterprise.



Diversified product portfolio

- **Extensive product portfolio**
HRC, CRC, Coated, Tinplate, Electrical steel, TMT bar, wire rod, rails, grinding balls, LRPC, etc.



Integrated manufacturing process

- From raw material processing plants to downstream value-added product capacities



Technological competence

- Combination of state-of-the-art steel making technologies: Corex, DRI, Conarc, Blast Furnace, BOF



Global presence

- International presence in Steel making (US), Value-added facilities (US, Italy)

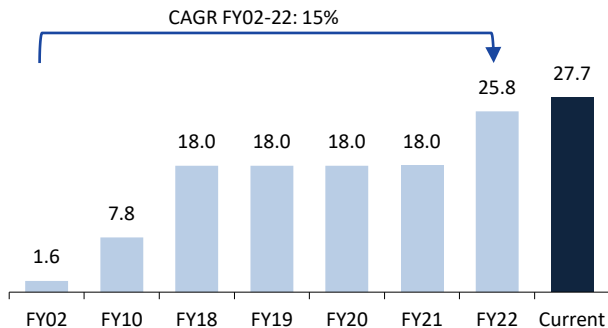


Strong distribution network and export presence

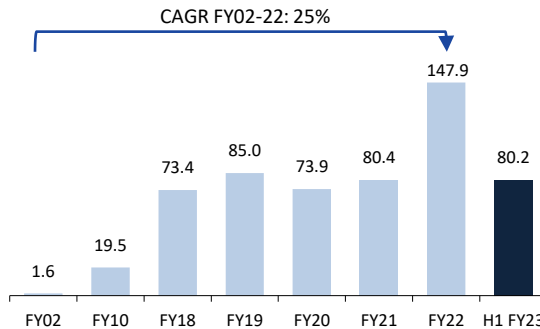
- Pan-India marketing and distribution network
- Export footprint in over c.100 countries across 5 continents

Transformational Growth and Value Creation

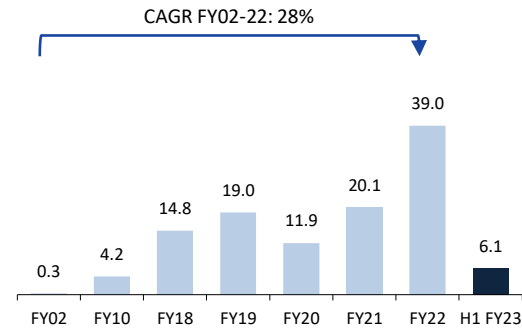
India Capacity (mtpa)



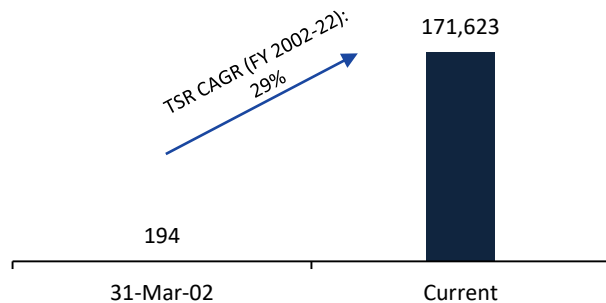
Total Revenue (₹ 000's Cr)



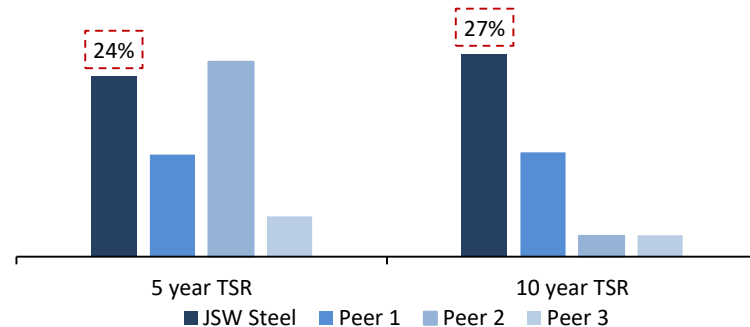
EBITDA (₹ 000's Cr)



Market cap (₹ Cr)



5 year and 10 year Total Shareholder Return



Navigating Near Term Volatility; Outlook Remains Positive

Strong external headwinds impacted H1 FY23 EBITDA

- Sharp decline in steel price after peaking in April; coking coal remained elevated
- Imposition of export duties in May 2022 hurt export volumes, while falling prices led to destocking in Q1
- Strong USD resulting in INR depreciation led to unrealised MTM losses on foreign currency debt
- Inventory & NRV losses due to lower steel prices

Expect stronger H2 performance

- Nimble marketing function and strong domestic distribution ensured highest ever India sale volumes in Q2. Focus on domestic market to continue in H2
- Improved margin outlook for H2 FY23 as benefit of lower raw material prices reflects in H2
- Benefit of higher production and strong domestic demand in H2; potential for working capital reduction

Long term outlook remains strong for JSW Steel

- Healthy steel demand growth in India driven by infrastructure, resi. real estate, auto, renewable energy and engineering sectors
- India to remain competitive exporter of steel and steel products
- JSW has industry-leading volume growth to meet rising domestic steel demand
- Robust balance sheet and diverse funding sources
- Strong focus on digitalisation & ESG initiatives to maintain cost competitiveness

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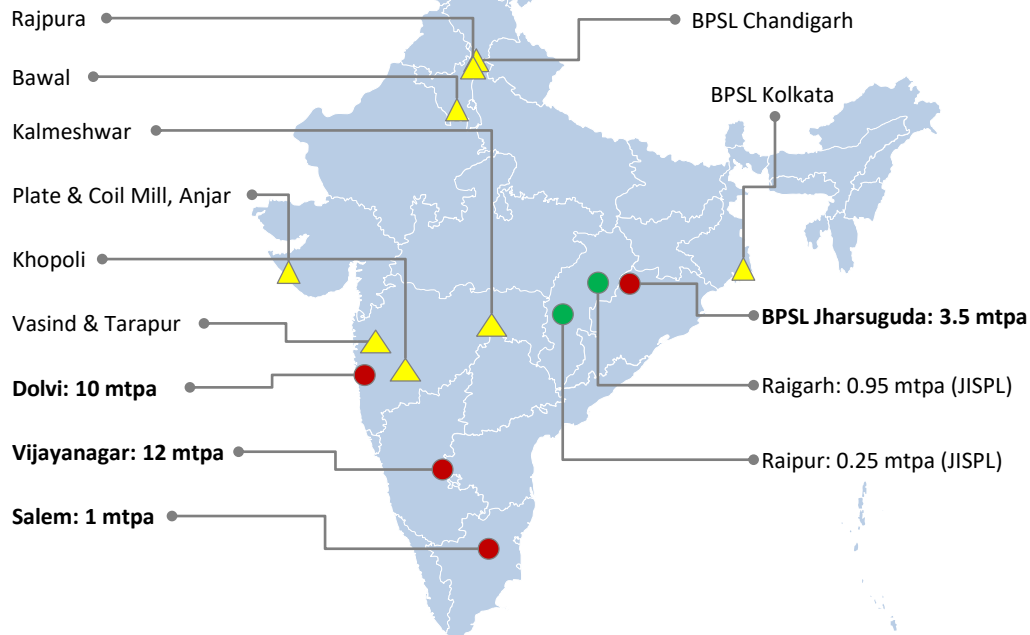


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Key Investment Highlights

- 1 Size, Scale & Growth** Leading steel producer in India with near-term growth to take capacity to 37 mtpa
- 2 Efficiency** Lowest cost of conversion in India, one of the lowest globally. Strong domestic iron ore linkage
- 3 Product Mix** Strong margins further enhanced by significant downstream capacities producing value added and special products
- 4 ESG** Sustainability at the core of the enterprise. Actively pursuing climate change agenda
- 5 Governance & Management** Strong board and experienced management team
- 6 Track Record of Growth** Track record of efficient organic and inorganic growth: India capacity growth of 15% CAGR (FY02-FY22)
- 7 Shareholder Value** Prudent capital allocation: 20 year TSR CAGR of 29%, and uninterrupted dividends
- 8 Balance Sheet Strength** Strong balance sheet and access to diversified funding sources globally

India

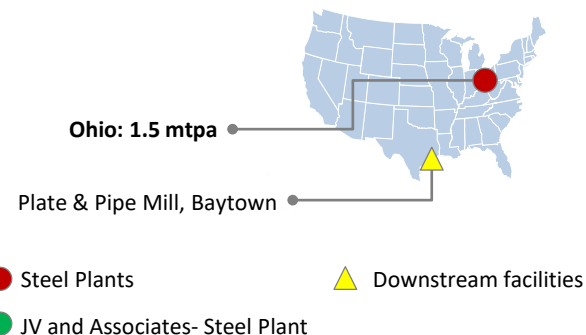


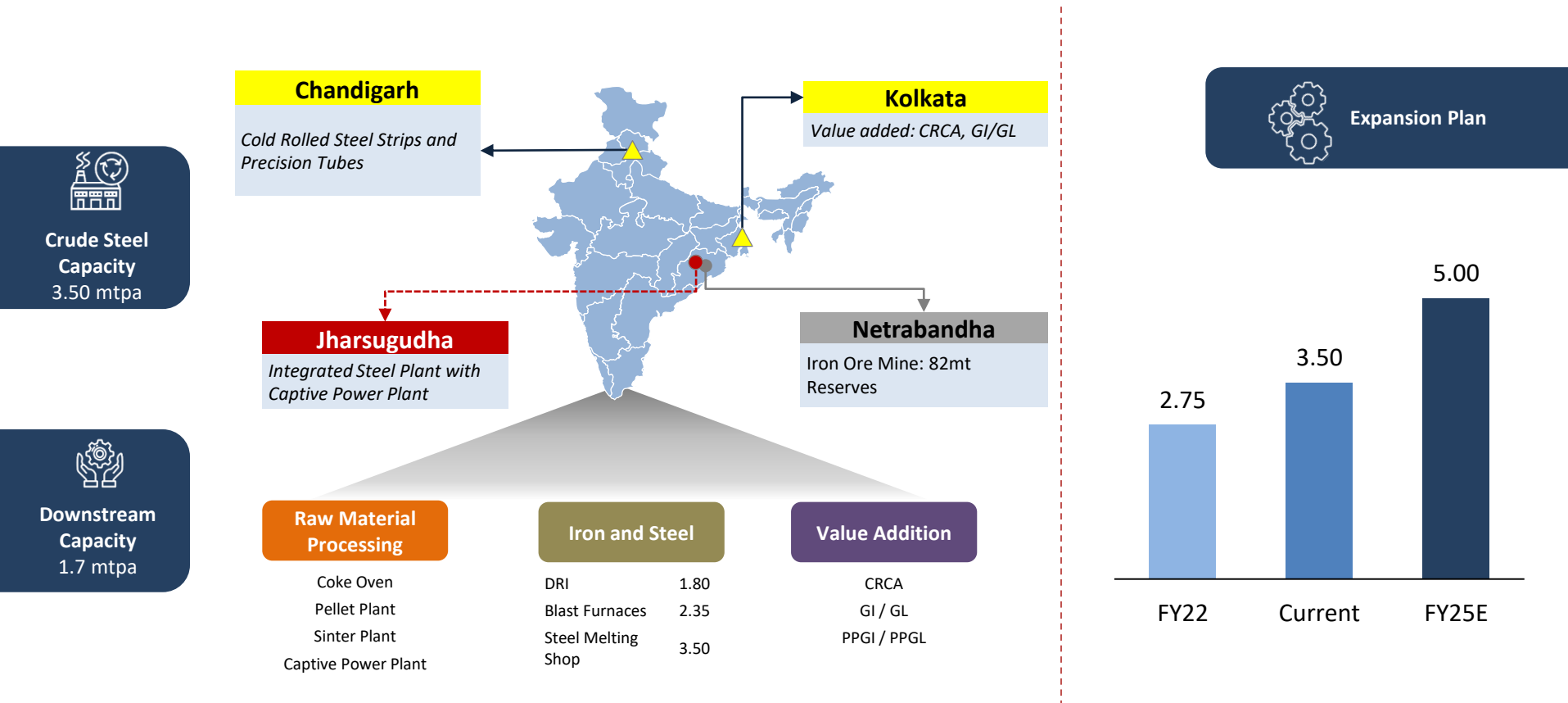
International

Europe

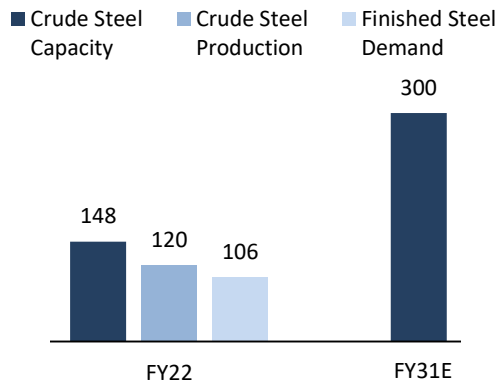


USA



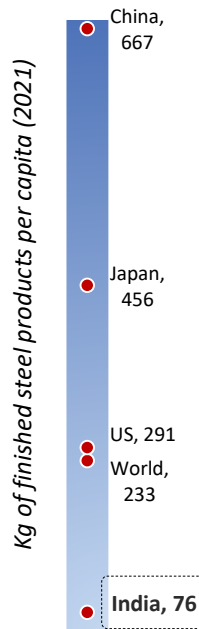


India Steel: Strong Fundamentals (mt)



- Govt. thrust on infrastructure, housing, and increasing the share of manufacturing in GDP
- \$1.4tn National Infrastructure Pipeline over next 5 years
- Realignment of global supply chains and “China+1” sourcing approach of MNC’s
- Production-Linked Incentive scheme launched by govt. to promote manufacturing in select sectors
- Robust demand from energy transition and resi. real estate

Significant room for growth in steel consumption in India



Recent changes of export and import duties on the sector

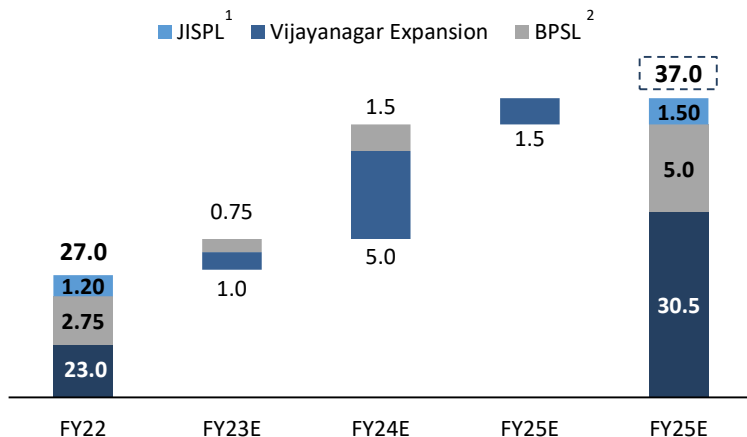
- Govt. of India announced several duty changes on 21 May 2022:

Product	Change in duties	Impact
Steel	Imposition of 15% export duty on most products	Red Circle
Iron Ore	Imposition of 50% export duty on Iron Ore and 45% on Pellets	Green Circle
Coking Coal	Removal of 2.5% import duty on Coking Coal	Green Circle

- Export duty on Iron Ore has brought down domestic prices
- Benefit from removal of import duty on Coking Coal
- Export duty on steel imposed to address inflation. Expected to be a temporary measure, as was the case in 2008

Best placed Indian steel producer to benefit from strong domestic demand growth

Near-term growth in JSW Steel's India steel capacity (mtpa)



- 5 mtpa Dolvi expansion commenced integrated operations in FY22
- 5 mtpa brownfield expansion at Vijayanagar
 - Value-accretive with low capex of c.\$400-500/ton
- Incremental expansion at Vijayanagar of existing facilities to enhance capacity by further 2.5 mtpa (1.0 + 1.5) in phases
- BPSL capacity expanded to 3.5mt (from 2.75mt); on track to expand to 5mt by FY25
- Organic brownfield capacity expansion capex well below global benchmarks of replacement cost of c.\$1,000/ton for BF-based capacity

Value-accretive brownfield growth at low capex per ton

Resilient business model based on continued focus on cost leadership



Leading position on global conversion cost curve

- Conversion cost of c.\$136/tonne in FY22



Technology, analytics and innovation continue to be the key levers to further optimize cost and operational efficiencies



Implementation of cost reduction projects targeting overall cost savings and reduced dependencies

- Pellet plant and coke oven facilities at Vijayanagar and Dolvi
- Utilisation of pipe conveyor system for transporting iron ore fines

WSD Aggregate Ranking^(a)

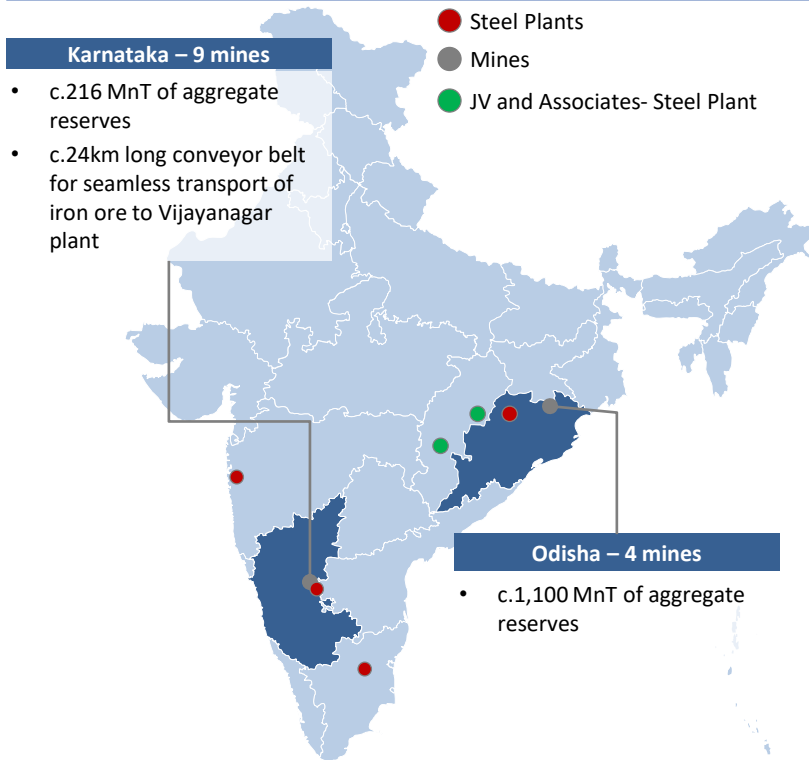


**# 4 ranked
in Asia**



**# 12 ranked
in Globally**

13 Captive iron ore mines ensuring adequate raw material supply



Raw material security

- Won 6 iron ore mines in Karnataka through auctions in 2016 and 2018, and 3 mines in FY20.
 - Targeting 6-7 mtpa from the Karnataka mines
- Acquired 4 iron ore mines in Odisha with c.1.1bn tonne reserves
 - Strategic long term iron ore security for Dolvi and Salem works
 - Consistent and high quality iron ore grade to enhance BF productivity
 - Opportunity to optimize and significantly reduce logistics cost over time
- Cost of captive iron ore comprises
 - Bid premium based on prevailing domestic prices declared by IBM
 - Royalties & other statutory levies
 - Mining & logistics costs

Strengthening Mining Operations in Odisha

- Enhance mining capabilities and efficiencies
 - Estimated capex of ₹3,450 crore over FY22-24
- Key strategic benefits of the project
 - Enhance own mining infrastructure to reduce reliance on outsourced mining
 - Grinding and washing facilities to improve the quality of the ore, aiding higher productivity at the steel-making operations
 - Implement digitalization across the mining operations

Non-DLMS

Production

Stockyard

DLMS

5 Parking Management

(Day of despatch activities)

Entry control through RFID authentication and Boom Barrier/traffic lights

5a Parking Entry

(DO-Tagging validation)

- ✓ Through FASTag reader (primary)
- ✓ Through vehicle number punch (failover)

5b Parking Exit

LED display to show trucks to proceed to mines for tare weight

- ✓ FIFO

6 Mines (Tare weighbridge)

Automated tare weightment
Proceed to loading point

7 LED displays for assisting navigation from primary bifurcation

8 Loading Point

Mobile app based authentication
Geofence based authentication

9 Gross Weightment

Automated gross weightment
Proceed to mines exit

10 Mines Exit

eTP, eWaybill and invoice generated



- 1 Integration with i3MS
Permit details generated in i3MS and fetched

- 2 Integration with SAP
DO creation in SAP
DO-Permit Tag

- 3 Despatch scheduling
(Day-wise despatch scheduling)
 - By Rail
 - By Road

- 4 Transporter Management
Transporter accepts permits/ DO to despatch

- ✓ Transporter tags i3MS verified vehicle
- ✓ Transporter checks for proper FASTag. Flags if FASTag not available
- ✓ Post JSW approval of tagged vehicles, transporter tags in i3MS

- 11 Receipt at railway siding/plant/port
 - Mobile app
 - RFID

Strong Margins Further Enhanced by Significant Downstream Capacities Producing Value Added and Special Products

Coated Products



Pipes & Tubes, Roofing,
General Engg., Solar,
Appliance, Colour Coater

Colour Coated Products



Appliance, Roofing,
Sandwich panel

Tin Plate



Oil Can, Non-oil Can,
Food Cans

Hot Rolled Products



Construction, Infrastructure,
General Engg., Pipe & Tubes,
Yellow goods

Cold Rolled Products



Automotive, General Engg.

Electrical Steel



Automotive, General Engg.

Alloy Steel Products



Automotive

Colour Coated



- Super premium, colour coated coils & sheets, with a 20 year warranty



- Premium colour coated coils & sheets, with a 15 year warranty.
- 3 variants - Cool Roof, Anti Dust & High Gloss



- High quality Al-Zn alloy & colour coated roofing sheets with anti-corrosion technology



- Superior colour coated sheets for OEM customers
- 6 variants – Anti Microbial, Anti Graffiti, Anti Dust, Anti Statics, Cool Roof and High Gloss

Galvalume



- Premium category Al-Zn coated roofing sheets & coils with 7 year warranty



- Desired weight as per customer requirements
- Corrosion protection and enhanced durability

GC



- Premium GC (galvanized corrugated) sheet with high durability



- Tinplate coils and sheets with high strength and formability, used in food and non-food packaging



- Al-Zn coated coils and sheets designed for complete requirement of solar structures (purlin, rafter, bracers, etc.)



- Galvanised steel that is lead free, suited for consumer durable sector with high safety and non-hazardous-material needs



- Greenpro certified TMT bars. Manufactured through primary production process to ensure purity & superior quality
- Unique rib pattern that provides best bonding with cement

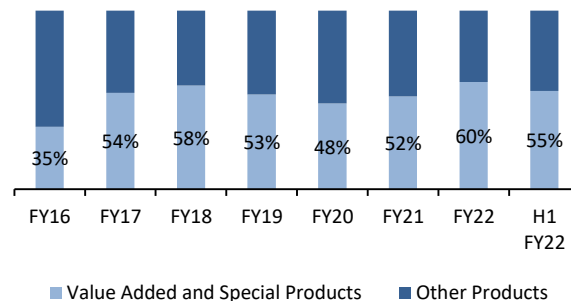


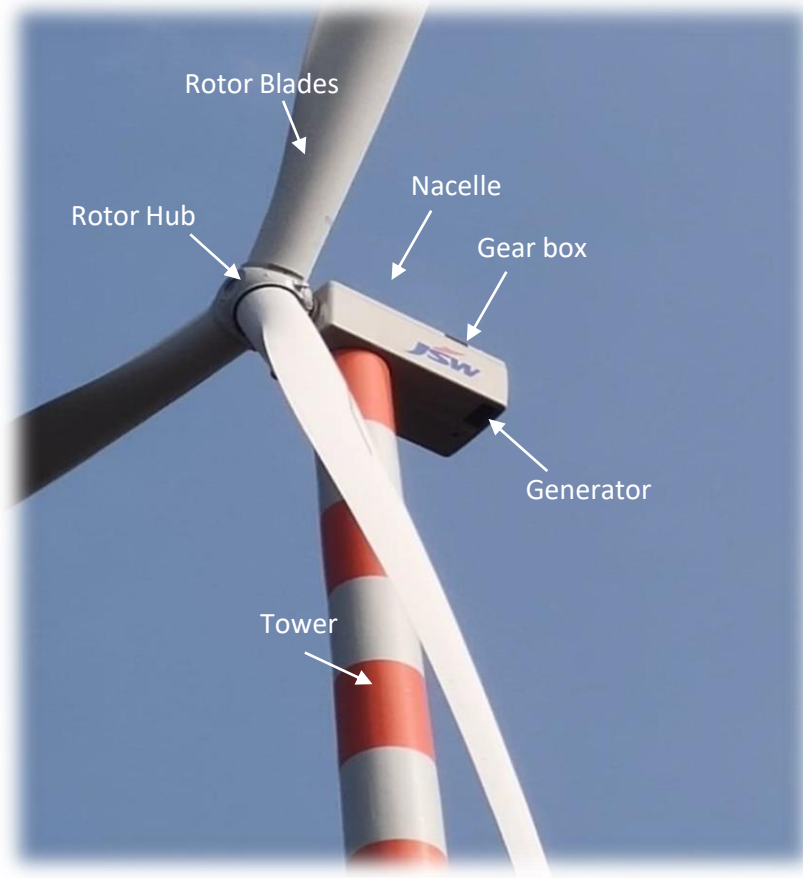
- Cut-to-Length HR sheets available in wide variety of sizes and grades



- Steel doors designed to overcome the common issues associated with wooden doors like seasonal door jams, fire, termites and heavy-handed installation process

JSW Share of Value added products





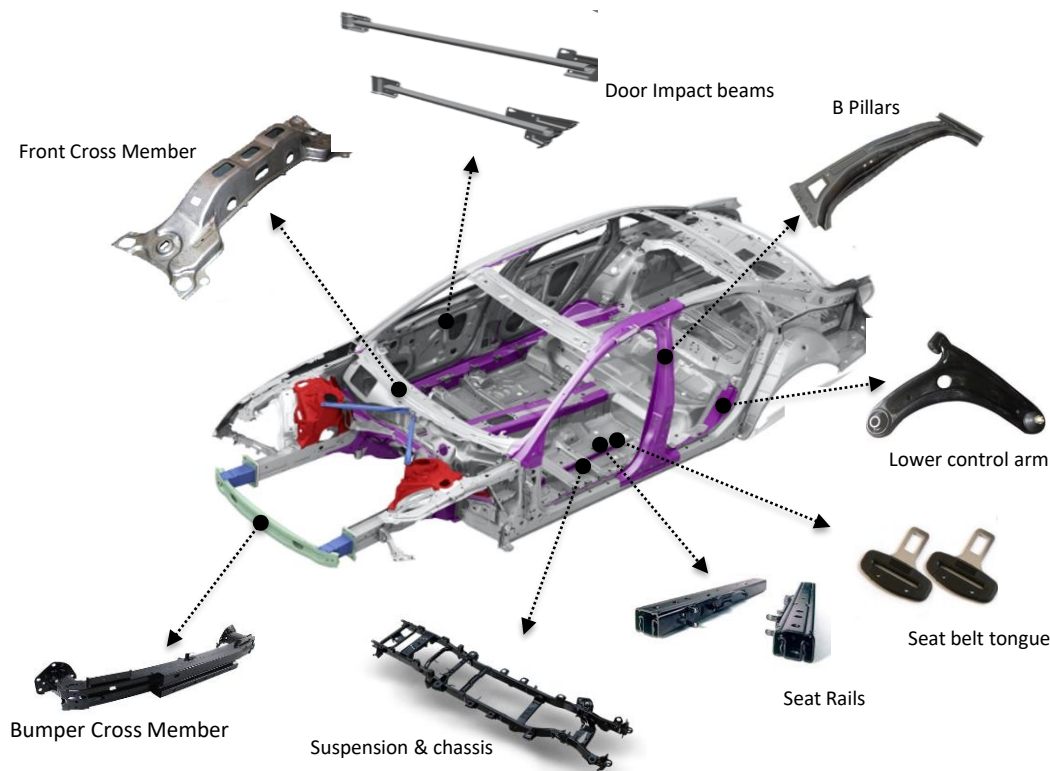
Supplying Steel for Wind Mills

- JSW Steel is on the way to become one of the preferred and leading suppliers to the wind sector
- JSW currently supplies HR Plates for Tubular Tower which is being used for Top, Middle, Bottom section and door floor. The tower uses the maximum tonnage of steel
- JSW Steel supplied steel to ~620 MW of wind projects in FY22 and ~860 MW during H1 FY23.

Did you know..?*

The percentage of steel used in the components of a large wind turbine assembly is as follows:

- Tower: 98%
- Rotor-hub : 95%
- Rotor-blades: 5%
- Gearbox: 98%
- Generator: 20-60%
- Nacelle frame and machinery: 85%



Focus on safer, lighter and fuel efficient cars

- Indian automotive industry is evolving to adopt consumer demand for 5-star rated cars for safety
- JSW Steel is working closely with auto makers to make cars safer, lighter and fuel efficient
- JSW's AHSS (advanced high strength steel) with high tensile strength and optimum formability enables low cost product solution with clear edge over high cost materials such as Aluminium & Carbon Fibre, to achieve high safety ratings
- All major crash and safety components - A & B pillars, cross-beams, door impact beams, etc. - are being built from JSW's AHSS steel
- JSW has also developed steel for suspension parts, which require optimum fatigue life in addition to high strength
- JSW Steel has become one of the preferred and leading suppliers to the automotive industry

SD Targets	FY05	FY30 Targets	Improvement	Strategic Approach
Climate Change <ul style="list-style-type: none"> Specific Energy GCal/tcs GHG Emissions tCO₂e/ tcs 	6.94	5.65	19%	<ul style="list-style-type: none"> Transition from thermal to renewable energy Reduction of fuel rate in BF and DRI Increased use of scrap in steel making Energy efficiency and process efficiency improvements through BATs Process improvements based on the World Steel 'Step Up' global benchmarking process
Water Security <ul style="list-style-type: none"> Specific water consumption (steel production) (m³/tcs) 	3.60	2.21	39%	<ul style="list-style-type: none"> Maintaining zero liquid discharge across operations Installation of technology for reduction of fresh water in cooling towers Adopting digitalisation for better water control and monitoring
Waste <ul style="list-style-type: none"> Specific Waste (Kg/tcs) Waste Recycled (%) 	NC	677	-	<ul style="list-style-type: none"> Integrated Strategy towards efficient waste management Focus on 'Zero waste to Landfill' Promoting Circular Economy
Air Emissions <ul style="list-style-type: none"> Specific process dust emissions (Kg/tcs) 	0.93	0.26	70%	<ul style="list-style-type: none"> Adoption of best available technologies like MEROS in sintering, Oven pressure Control technology and CDQ in Coke Plants, TRT's in BF SOx & NOx emission targets for FY30 have been revised to 0.82 kg/tcs and 0.91 kg/tcs respectively
Biodiversity <ul style="list-style-type: none"> Biodiversity at our operating sites 	-	Achieve 'no net loss' of biodiversity		<ul style="list-style-type: none"> Continue to enhance Biodiversity at all our locations and operations to achieve 'no net loss' Increase green cover across operations

JSW is committed to providing a safe and healthy working environment and achieving an injury- & occupational illness-free workplace.

Our vision is to achieve 'Zero Harm'

Building a Culture of Health & Safety

JSW's Roadmap to Vision 000



Health & Safety Initiatives

- India's most sophisticated Safety Experience Centre inaugurated In Vijayanagar
- Launch of Safety Charter for Steel & Coated plants
- Cluster of Safety Excellence launched in July 2022 to improve Safety Standards
- 140,000 + safety observations carried out in Q2 FY23
- 8500+ Inspections and Audits at plants in Q2 FY23



Competency Development

- "Manthan" program for Skill assessment of existing manpower using CUDBAS* approach initiated at JSW Coated plants
- 6600+ Safety E-Learning Modules completed in Q2 FY23
- 40+ Contractors assessed through JSW CARES (Contractor Assessment & Rating for Excellence in Safety) during Q2 FY23
- 200+ staff has undertaken safety champions program and successfully qualified as "Safety Champions"



Awards & Recognitions

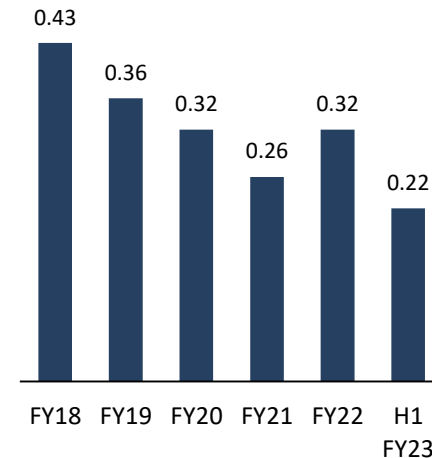
- Dolvi & Salem Works won "Platinum Award" in the ICC National Occupational Health & Safety Awards – 2022
- Dolvi works won gold award of "Occupational Health & Safety Award-2022" from Grow Care India.
- JSW Steel Salem Works won Platinum Award at Apex India Safety Award 2022

Zero
major
incidents

Zero
injury

Zero
harm

LTIFR



Key intervention areas



Health &
Nutrition



Agriculture



Water,
Environment &
Sanitation



Education



Waste
management



Skill
development



Art, culture &
heritage



Sports



Mega health and cancer detection
camp in Odisha



Eye camps to extend Vision Screening
and Correction at Vasind & Dolvi



Classrooms in 9 schools renovated
in Kalmeshwar, Maharashtra



JSW Shakti: Entrepreneurship
Development and Women Empowerment
program

Sustainability Initiatives & Recognitions



Initiatives - Decarbonisation in Focus



- SEED (Sustainable Energy Environment and Decarbonisation) program initiated at Vijayanagar
- Aimed at building granular shop-specific climate action plans with clear emission baselines, targets and charters



Li-ion battery operated coil transfer cars at JSW Steel Coated plants to reduce emissions



JSW Steel and SMS Group, Germany sign an MoU for Decarbonization Projects



JSW Steel joins EV100+ as a Founding Member

United Nations Global Compact

JSW Steel becomes a participant of the United Nations Global Compact



Recognitions

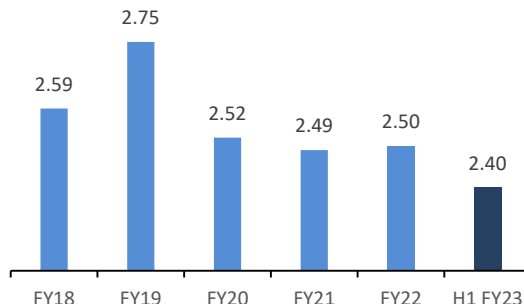
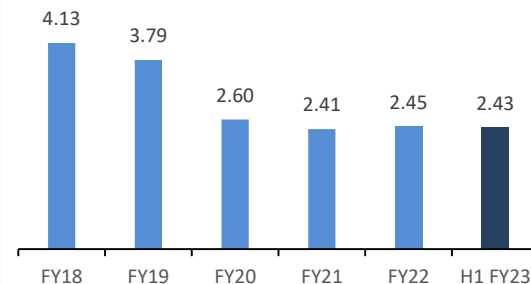
Gold Award 12th Exceed Environment Award 2022



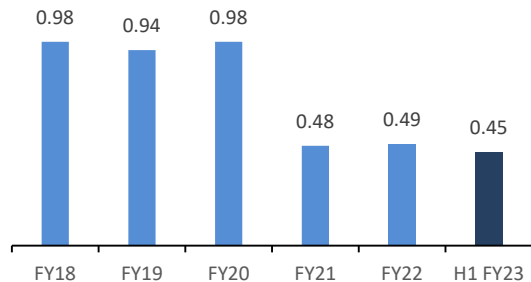
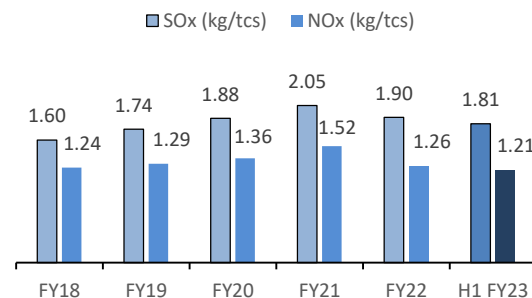
Platinum Award Grow Care India Environment Excellence Award 2021



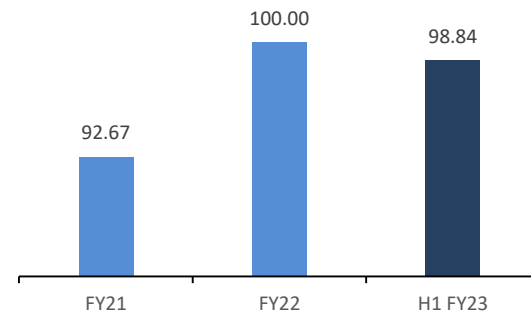
Specific Energy Consumption (Gcal/tonne)

GHG Emission Intensity (tCO₂/tcs)Specific Freshwater Consumption (m³/tcs)

Dust Emissions (kg/tcs)

SO_x & NO_x

Waste Utilization (%)



Strong Board and Experienced Management Team

Chairperson - Emeritus



Savitri Devi Jindal

Chairman and MD



Sajjan Jindal

Executive Directors



Seshagiri Rao M.V.S
Joint Managing Director
and Group CFO



Jayant Acharya
Deputy Managing Director

Independent Directors



Seturaman Mahalingam
CA, Ex-CFO of TCS, Ex member
of Tax Admin. Reform
Commission



Harsh Charandas Mariwala
Chairman of Marico, Chairman
and MD of Kaya



Nirupama Rao
40 years of experience as a
diplomat, Ex-Foreign Secretary
of India



Dr. Punita Kumar Sinha
Former CIO at The Asia
Tigers Fund



Haigreve Khaitan
Senior Partner at
M/s. Khaitan & Co



Ms. Fiona Jane Mary Paulus
37 years of experience in
resources and energy
investment banking, risk mgmt.



Marcel Fasswald
Former COO & CTO of SMS
Group, Germany

Nominee Directors



Dr. M.R. Ravi, IAS
Nominee Director
of KSIIDC



Hiroyuki Ogawa
Nominee Director
of JFE Steel Corporation



JSW-JFE partnership

Partnership overview

- 14.99% minority stake bought by JFE in 2010
- Access to cutting edge technologies
- Operational excellence for cost reduction
- Balance Sheet deleveraging to support growth

Technology agreements benefits:

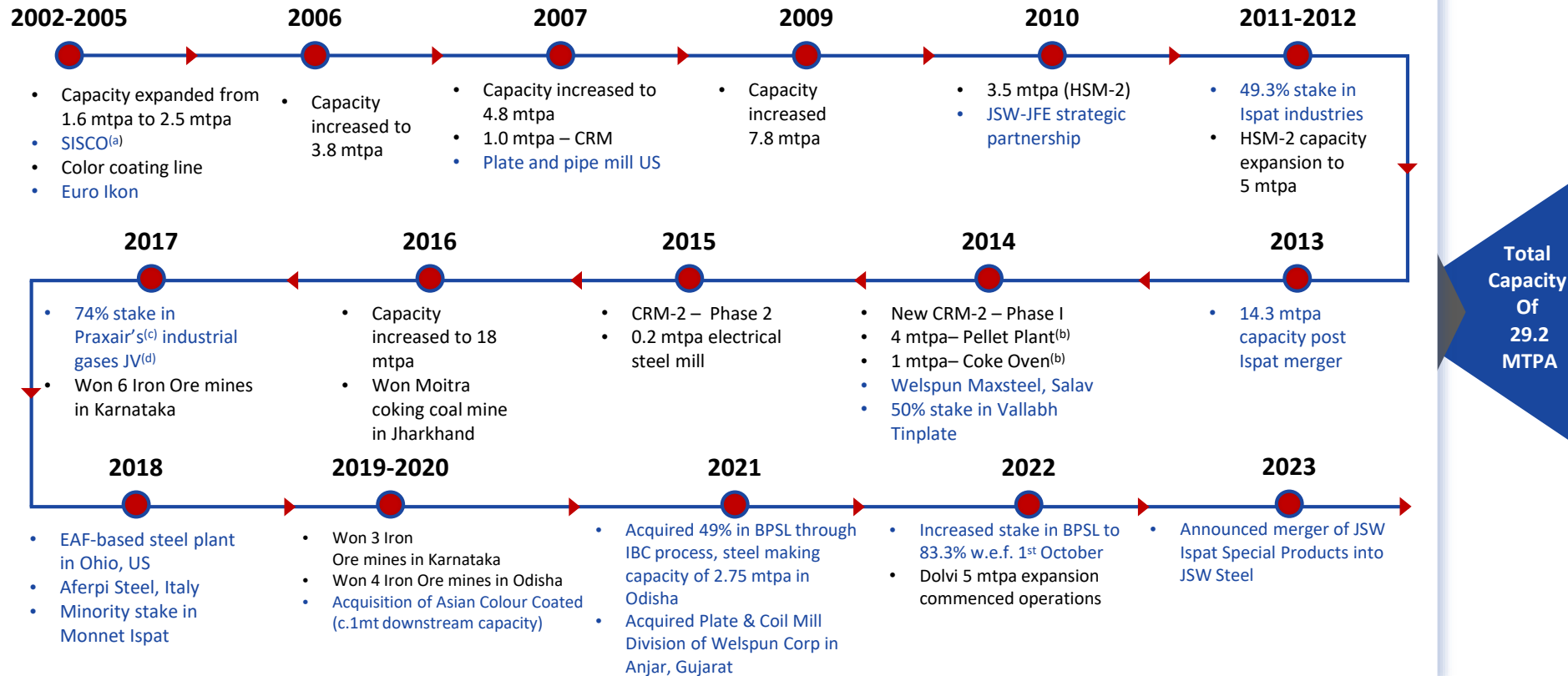
- ✓ Access to fast growing auto steel market
- ✓ Technical know-how for electrical steel manufacturing
- ✓ Short learning curve
- ✓ Application engineering
- ✓ New product development
- ✓ Benchmarking and personnel training

Other benefits:

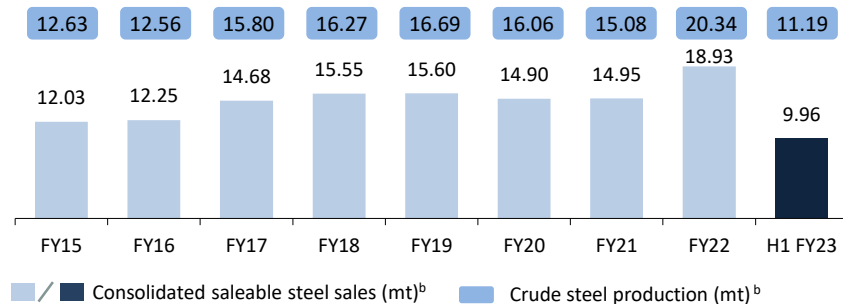
- ✓ Improvement in quality, productivity, yield, energy efficiency
- ✓ Sharing best maintenance, environment and safety practices
- ✓ Benchmarking, training and talent sharing
- ✓ Standardization of processes

Proven Track Record of Efficient Organic and Inorganic Growth

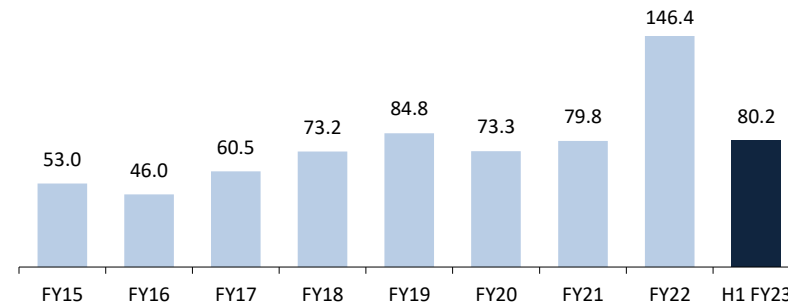
Combination of organic and inorganic growth



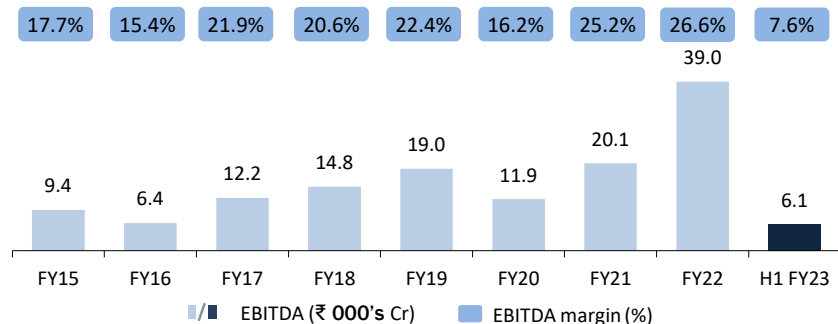
Strong track record of volume growth



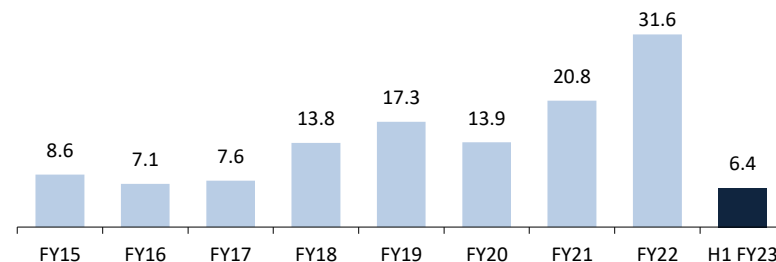
Track record of Operating Revenues (₹ 000's Cr)



Robust EBITDA Margin through the cycle

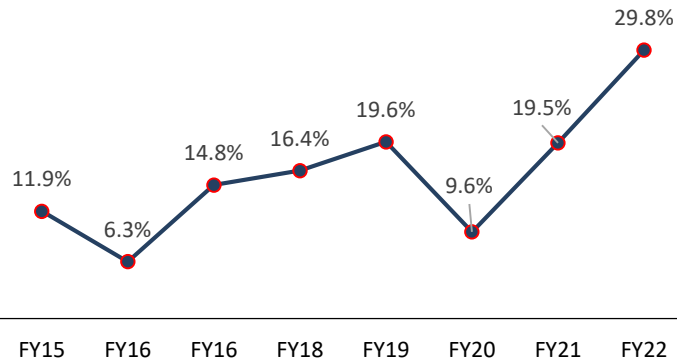


Cashflow from Operations (₹ 000's Cr)

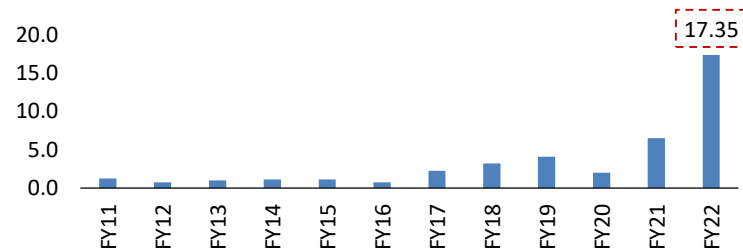


Note: (a) FY18 numbers based on restated financials (b) Production and Consolidated Sales Volume comprises JSW Steel Indian operations and excludes JV's. BPSL has been included since H2 FY22 as it became a sub from 1 Oct 2021. Sales volumes are after netting-off inter-company transactions.

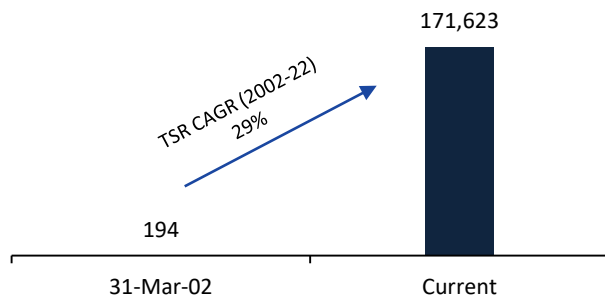
ROCE



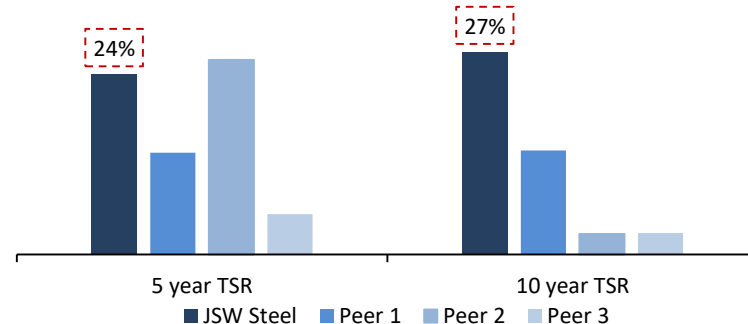
Uninterrupted Dividends

Dividend Policy of paying out 15-20% of Consol. Net Profit¹

Market cap (₹ Cr)

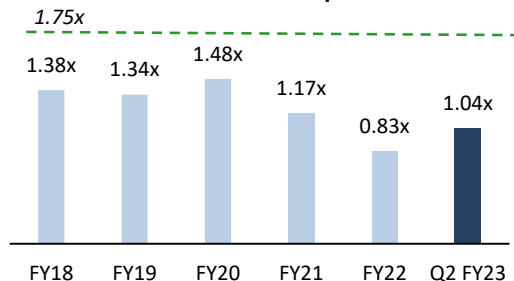


5 year and 10 year Total Shareholder Return

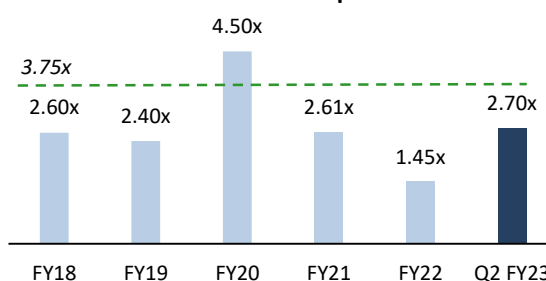


Value-accretive growth through economic cycles

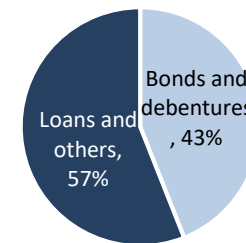
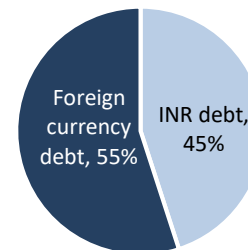
Net Gearing (ND/Equity) well under the stated cap of 1.75x



Leverage (ND/EBITDA) well under the stated cap of 3.75x



Diversified Funding Sources



Strong Liquidity and Credit Ratings

- Cash and Cash equivalents of ₹13,291 crore
- Credit Ratings:
 - International: Moody's: Ba1 (Stable Outlook) and Fitch: BB (Stable Outlook)
 - Domestic: CARE: AA (Stable Outlook), ICRA: AA (Stable Outlook), IndRa: AA (Stable Outlook)

Debt Profile

- Access to diverse pools of liquidity. Strong relationships with domestic and international banks and financial institutions
- Net Gearing and Leverage well under stated caps of 1.75x and 3.75x, respectively
- Successfully raised US\$3.69bn through global bond markets since 2014
- Issued global steel industry's first USD Sustainability Linked Bond in September 2021

Agenda



Sustainability

5

Overview

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Key Investment Highlights

13

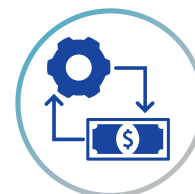
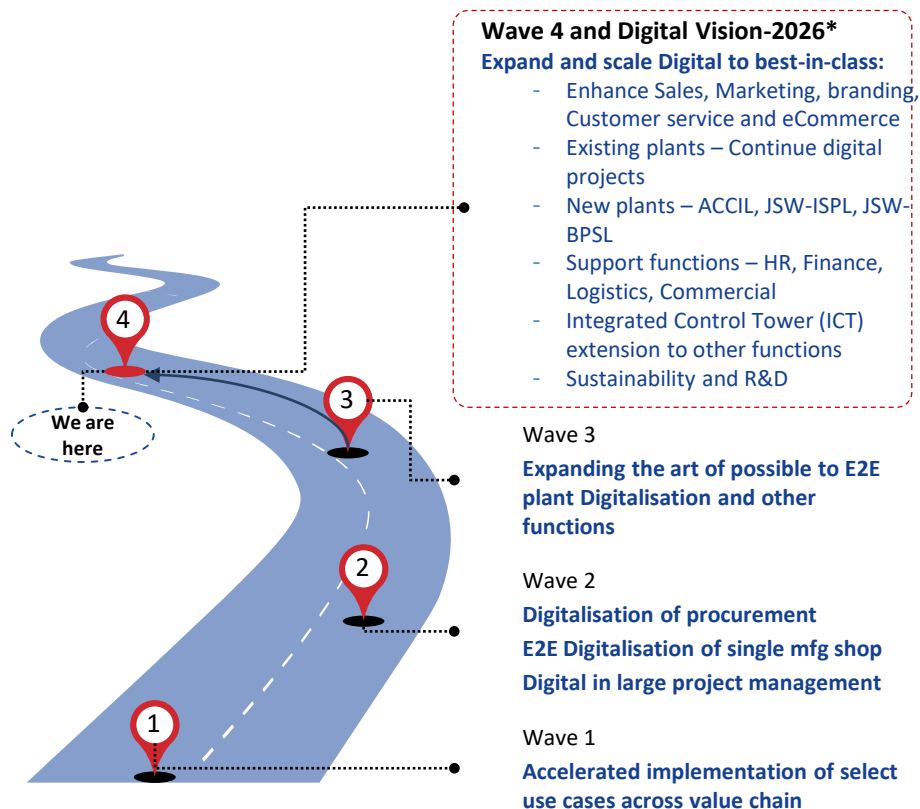
Digitalisation at JSW Steel

37

Appendix

41

Digitalization: JSW's Approach & Impact Created



130+

Digital Assets
Created



6,000+

Employees engaged
in the digital journey



400+

Digital lighthouses
and **projects**

Guiding principles behind Digitalisation



Agile

- Fail-fast approach
- Continuous improvement
- Discreet problems



Value lens

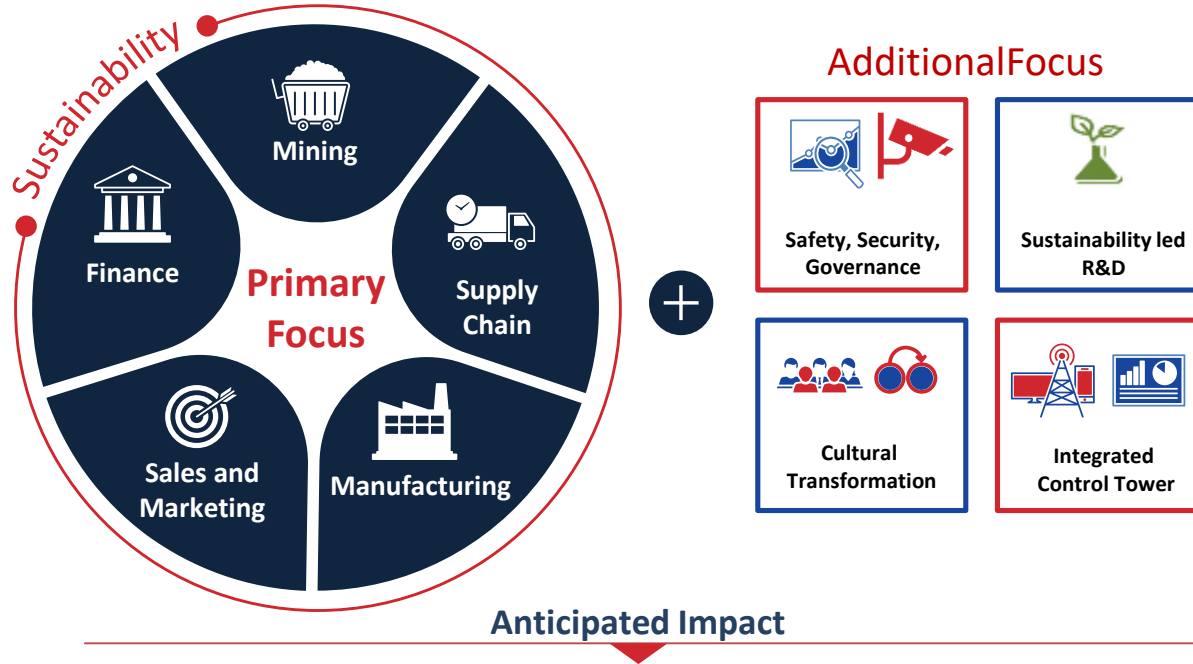
- ROI key to investment
- Safety added focus
- Customer, Supplier & Employees Experience



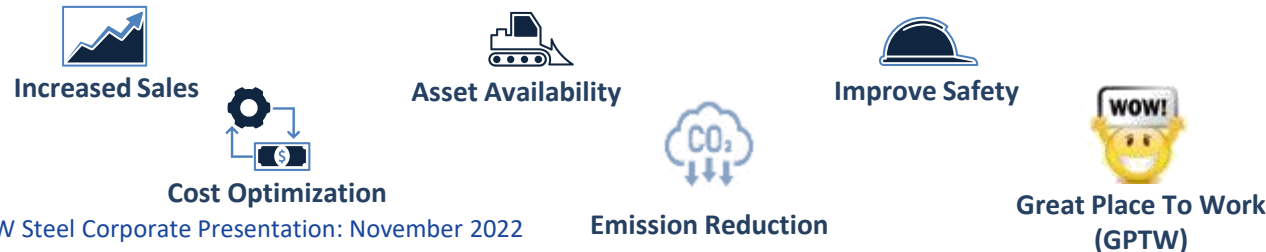
Sustenance

- Nurture inhouse talent
- Promote Horizontal deployment
- PMO & Governance

JSW Steel's Digital Focus Areas



Anticipated Impact



Technologies Used

Core Systems (SAP, Salesforce, Microsoft Azure, DarwinBox), IoT, AI/ML, Analytics, Cloud/Edge Computing, RPA, Intelligent Cameras
→ Leveraging JSW Digital team, Tech Partners and Startup ecosystem



End-to-End Functional Transformation focus

From point projects to E2E Transformation approach enabled by platform-driven strategy



People Upskilling

- Target 9000 hours of Data Science training in FY 2022-23
- Tech sessions, Online courses, Symposiums enabled through Cultural Transformation efforts

(6) Integrated Manufacturing Analytics

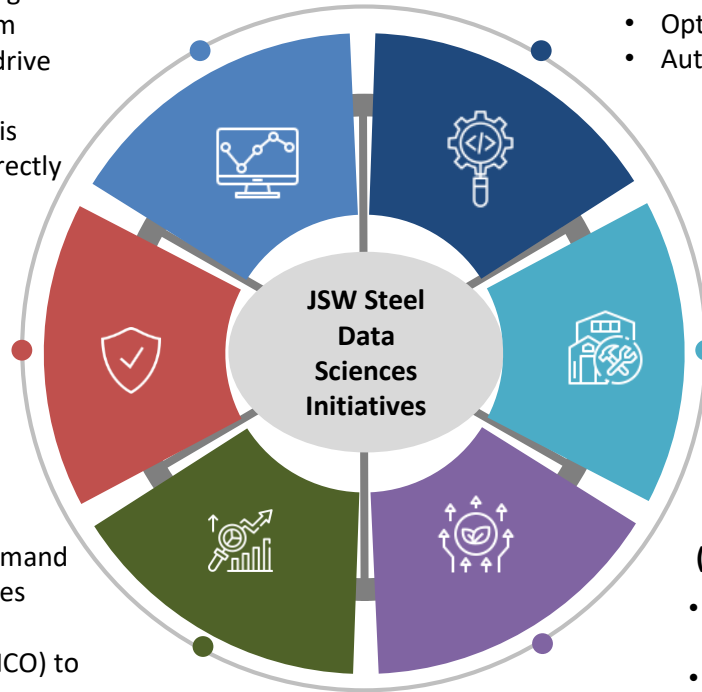
- Integrated Control Tower (ICT): Persona-based manufacturing dashboards to provide single-view for all plants for the leadership team
- Effective Root-Cause Analytics (RCA) to drive corrective action
- Access to historical data for trend analysis
- Automated data capture for 90% KPIs directly from source systems

(5) Safety and Security Improvements

- Digital Vision Platform (DVP) for intelligent safety and security surveillance resulting in reduction in accidents

(4) Business Growth

- Construction and Infrastructure (C&I) "Demand Sentinel" analytics and dashboards for sales activity prioritization and acceleration
- Optimization of Non-Confirmed Orders (NCO) to reduce liquidation days



(1) Process Improvement

- Raw material blend optimization
- Defect detection using video analytics
- Optimization of arcing time
- Automation of EOF blow profiles

(2) Capital Projects, Digital Twins and Predictive Maintenance

- Drone-based monitoring of capital project progress
- Drone-based structural monitoring of equipment, that are difficult to access and inspect, resulting in preventive maintenance activities
- Digitalization of maintenance activities across various steel plants saving around 1,000 person-hours of downtime and reduction in manual maintenance activities

(3) Energy Optimization and Sustainability

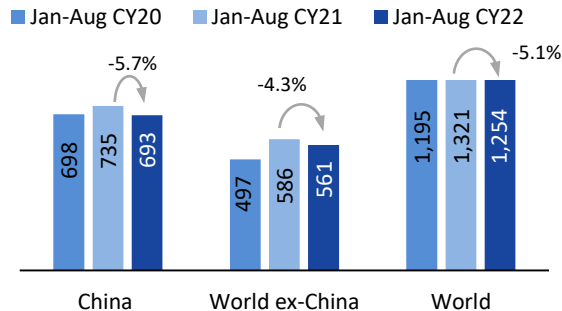
- Dashboards and analytics for Emissions management
- Real-time modeling to forecast power consumption demand within 15 minutes blocks

Agenda

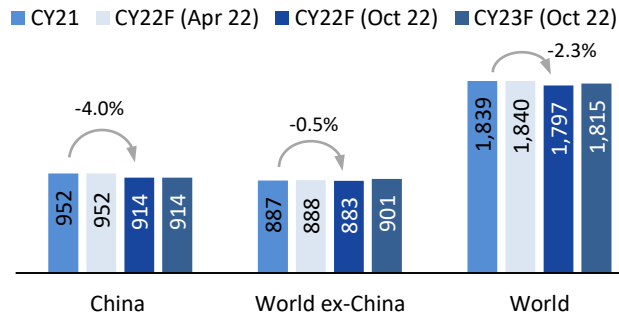


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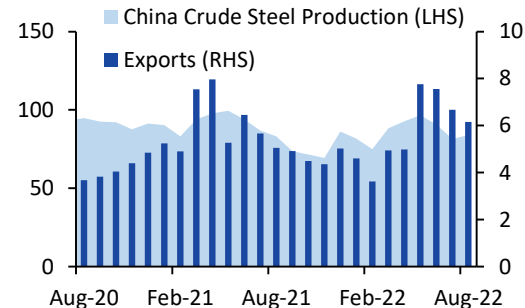
Crude Steel Production – Jan-Aug (mt)



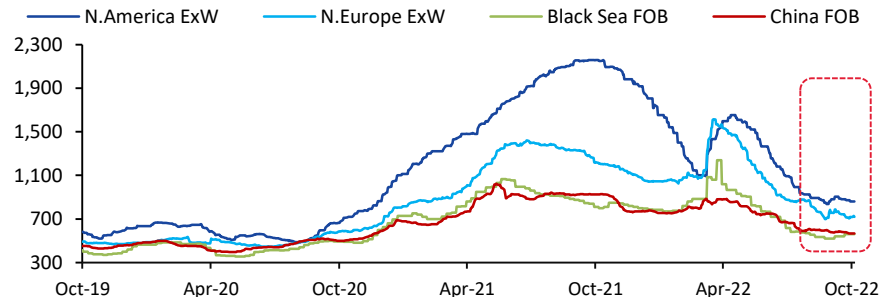
Steel Demand (mt)



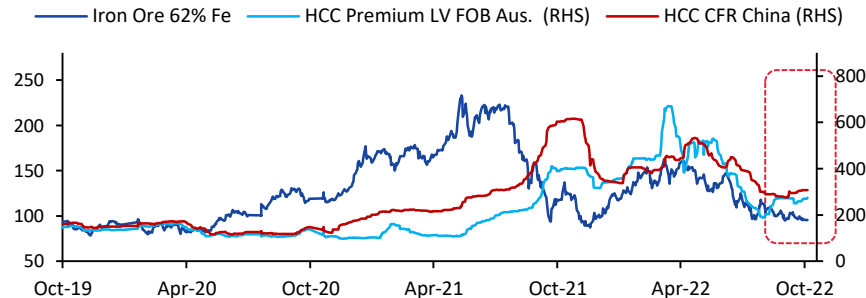
China Steel Production and Export (mt)



HRC Prices US\$/t



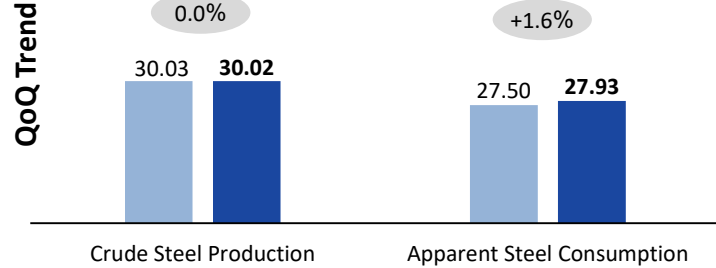
Raw Material Prices (US\$/t)



Steel prices stabilised following correction; coking coal remains elevated

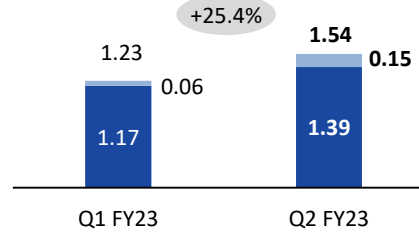
Production and Consumption (mt)

■ Q1 FY23 ■ Q2 FY23



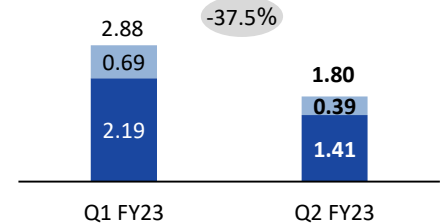
Steel Imports (mt)

■ Finished ■ Semis

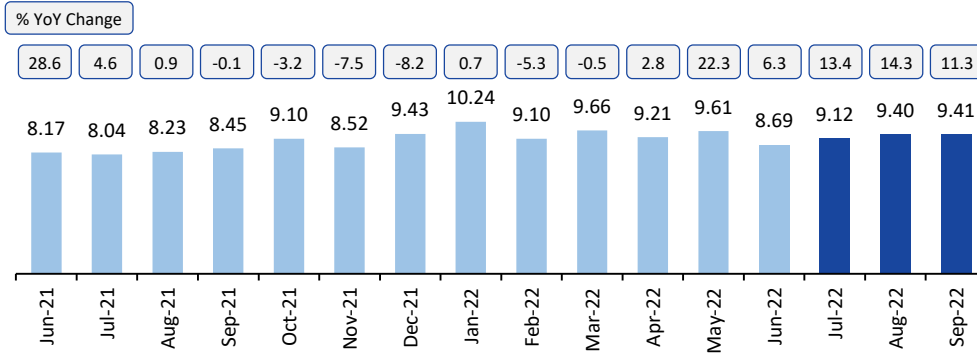


Steel Exports (mt)

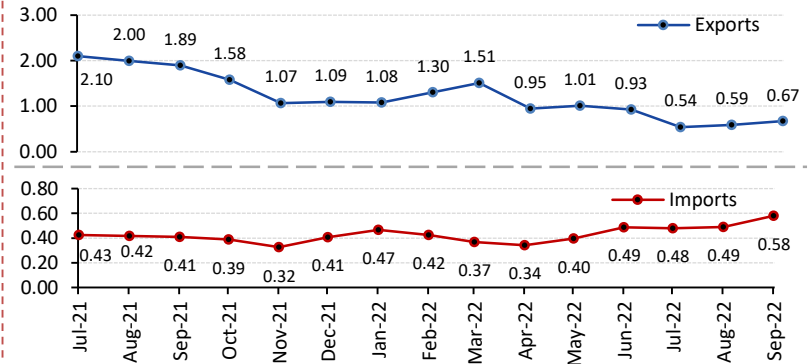
■ Finished ■ Semis



Apparent Steel Consumption (mt) and YoY Growth



Monthly Steel Imports (mt) and Exports (mt)



Stable domestic demand; falling exports and rising imports is a concern

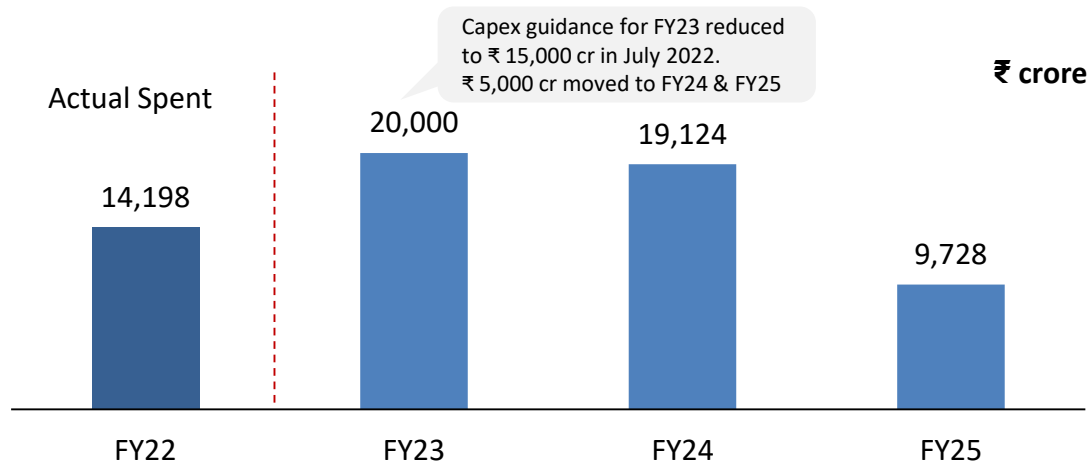
- Committed to Sustainability targets with focus on 5 key areas: Climate Change, Water Security, Waste, Air Emissions, Biodiversity
- Maintain healthy margins despite challenging external environment:
 - Leverage low conversion cost advantage
 - Optimise raw material costs by increased usage of Odisha captive ore and optimum blending of coking coal
 - Continued focus on value-added and special products
 - Remain nimble and adapt to evolving market scenario
- Realise full benefits from 5mt Dolvi-II expansion, BPSL expansion, and expanded downstream capacities
- Focus on delivering next phase of growth: value-accretive 5mtpa brownfield project at Vijayanagar
- Continued focus on adoption of Technology and Digitalisation to create value and drive sustainability
- Committed to maintaining a strong balance sheet and credit ratings

Continued focus on creating shareholder value

All fig. in million metric tonnes

Particulars	FY23	
	Crude Steel Production	Sales
Consolidated Indian Operations	23.60	22.60
Joint Control Entity:		
JSW Ispat Special Products Ltd.	0.70	0.70
Indian Operations incl. Joint Control	24.30	23.30
JSW Steel USA Ohio	0.70	0.70
Total Combined Volumes	25.00	24.00

Annual Capex Update



Particulars	₹ Cr
Unspent Capex including creditors & acceptance	33,259
Sinter plant and other facilities to support 5mtpa expansion at Vijayanagar ¹	5,000
LRPC ² and Other Projects	1,401
Sustenance Capex	4,704
Sub Total	44,364
BPSL: Expansion from 2.75mtpa to 5mtpa in 2 phases & Sustenance Capex	4,488
Total	48,852

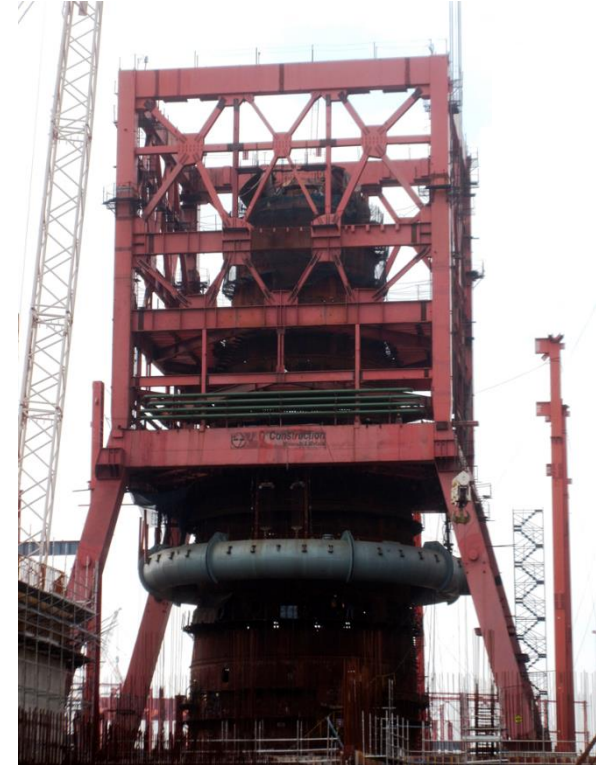
Key Project Updates - Vijayanagar

5mtpa brownfield project

- Construction activities for all packages underway
- Equipment erection commenced for all packages
- Project to be completed by FY24

Coke Oven Plant

- 1.5 mtpa Coke Oven battery: Battery A commissioned in September 2022. Battery B expected commissioning by Q1 FY24
- Capacity enhancement of further 1.5 mtpa to support the 5 mtpa steel-making expansion. Phased commissioning in FY24



5mtpa expansion: Blast Furnace under construction

Key Project Updates – BPSL

Phase-I expansion to 3.5 MTPA

- Major facilities completed viz. Sinter Plant 2, VPSA* Oxygen units and modification of EAF, SMS and Casters
- Expected ramp-up by Q4 FY23



2nd Filter Press at BPSL

Phase-II expansion to 5 MTPA

- Long lead-time items ordered (new Wire Rod Mill-2 and SMS-2, PCI upgradation for BF-1 & 2)
- Civil work & Structural Erection work in progress in new Wire Rod Mill-2 and SMS-2 Project
- Project to be completed by FY24



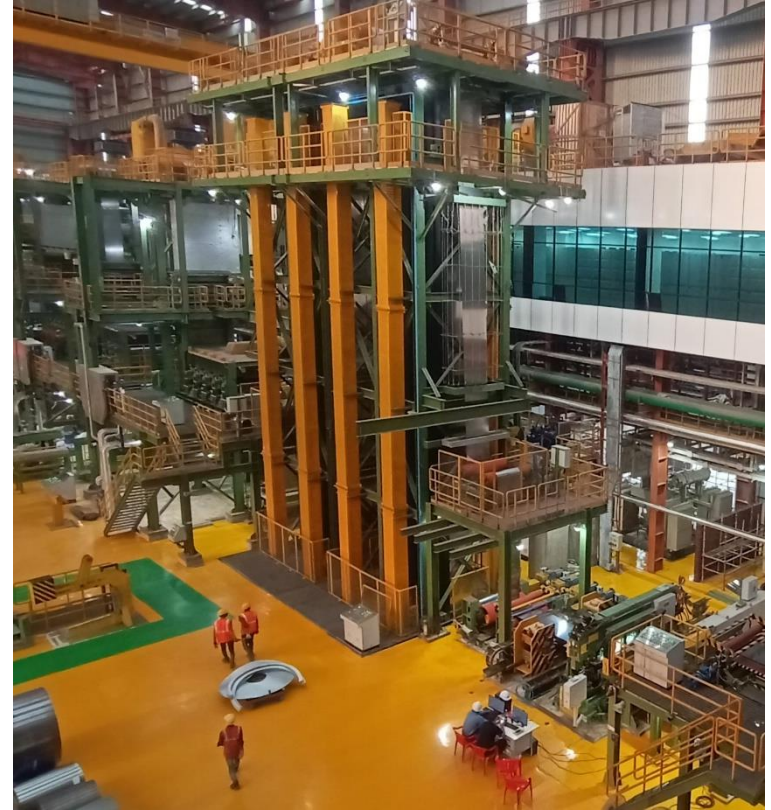
SMS-2 construction at BPSL

Vasind and Tarapur: Downstream projects

- **0.5mtpa Continuous Annealing Line at Vasind**
 - Commissioned in August 2022
- **Second Tinplate line of 0.25 mtpa at Tarapur**
 - Commissioned in September 2022

Other Downstream projects

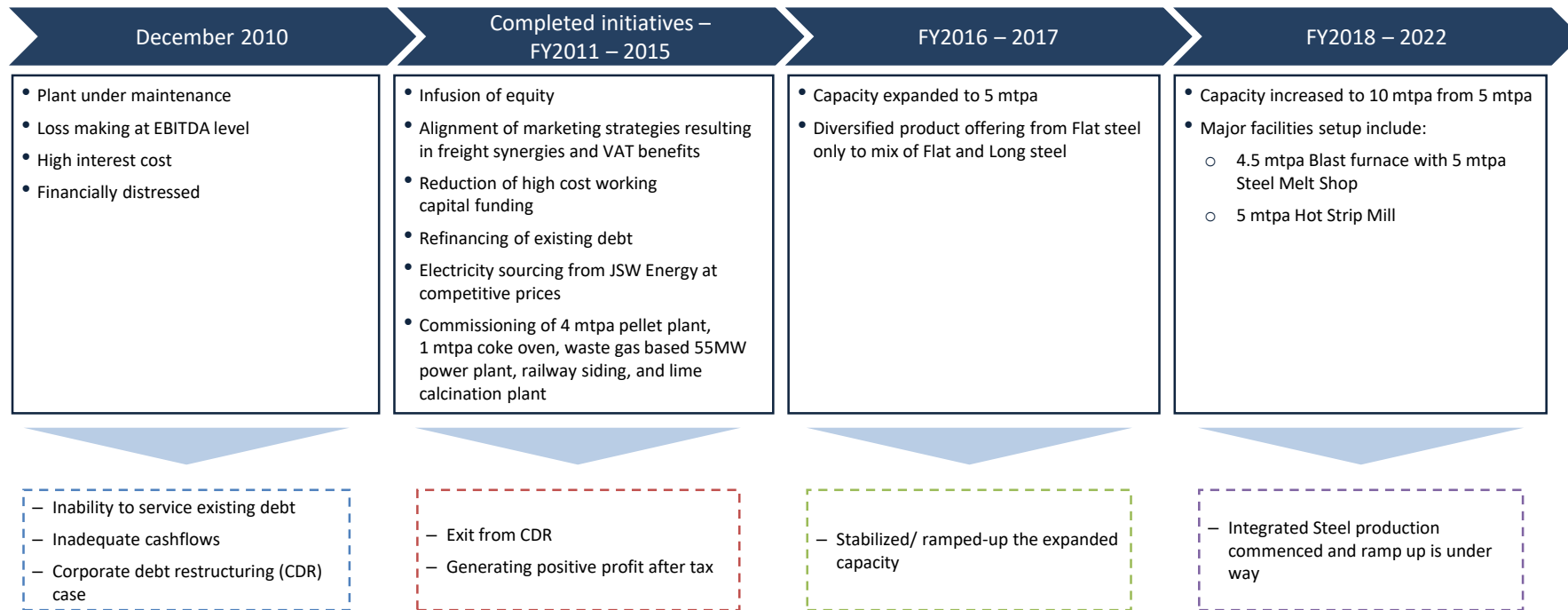
- **0.25 MTPA Colour Coating line at Rajpura, Punjab**
 - To be commissioned in Q4 FY23
- **0.12 MTPA Colour Coating line in Jammu & Kashmir**
 - To be commissioned in Q1 FY24



Second Tinplate line at Tarapur

Case study: Turnaround Strategy at JSW Ispat's Dolvi plant

JSW Steel has a proven track record of identifying, acquiring and integrating assets creating synergies and optimizing costs



Able to leverage an acquisition to maximum value accretion through application of knowledge and experience

Awards & Recognitions



- Rated at **Leadership Level (A-)** by CDP
- **JSW Steel** included in the **Dow Jones Sustainability Index** for Emerging Markets
- **WSA Steel Sustainability Champions** for 4th consecutive year in 2021
- **Corporate Governance & Sustainability Vision Awards 2020**
- **“Steelie Award”** by WSA for **Excellence in Life Cycle Assessment** for JSW Neosteel FE550D Grade TMT rebar
- Environmental Product Declarations (EPDs) for all finished steel products
- GreenPro certification for TMT rebars (JSW Neosteel)

2020 & 2021

2019

- Recognized as one of the **“Steel Sustainability Champion”** by World Steel Association (2018)
- Deming Prize for **Salem Works**

2018

- Deming Prize for **Vijayanagar Works**
- JSW Steel included in the **NIFTY 50 Index**

2017

Golden Peacock Innovative Product Award

2016

“National Award for Supply Chain and Logistics Excellence” under the steel industry category by the Confederation of Indian Industry

2015

“Industry Leadership Award” in steel, metals and mining at Platts Global Metals Awards



Mr. Sajjan Jindal
Chairman of World Steel Association (2021-22)
First representative from India to serve in this position

Our Steel is Helping Build Key Infrastructure in India



Solar Project: Contributed **9.1 GW**
Wind Project: Contributed **620MW**



Metro Projects: c.41km of metro project lines (Mumbai, Pune, Nagpur, Bengaluru, Ahmedabad, Chennai, Indore, Kochi & Delhi)



Water Pipelines: c.916 km of water pipelines across major projects



Oil & Gas Pipelines: c.1,020 km of pipelines across major projects



Railway Freight Corridors: c.217km of railway corridors (Mumbai-Haryana WDFC & Ludhiana-West Bengal EDFC)



High Speed Rail (Mumbai - Ahmedabad)
c.90kT supplied



Expressways and Highways: Over **1,145km of roads**. Over **121km of expressways** (Dwarka, Purvanchal & Mumbai-Nagpur Samruddhi)



Sealinks and Bridges: Over **219 km of major projects** (Trans-Harbour Nhava Seva Link- Mumbai, Zuari river eight lane bridge- Goa & Nadia Bridge- West Bengal)



Nuclear Power Plants: Supplied for Kudamkulam, Tarapur, Kakrapar Power Projects



ISRO & Airports (Bangalore, Pune, Chennai, Hyderabad, Goa, Gujarat)

THANK YOU

Investor Relations Contact:
ir.jswsteel@jsw.in